

PATENT
Reply Under 37 CFR 1.193
Expedited Procedure

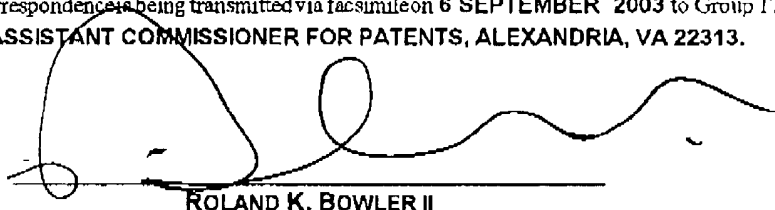
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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ROLAND K. BOWLER II

In re application of:)	
)	Atty. Docket No. 8313-60
MISZCZAK ET AL.)	
)	Examiner M. Elve
Appl. No.: 09/227,242)	
)	Art Unit 1752
Filed: 8 January 1999)	
For: "Ultra Low Carbon Metal-Core Weld Wire")	

TRANSMITTAL UNDER 37 CFR 1.193

Assistant Commissioner for Patents
Alexandria, Virginia 22313

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Appl. No. 09/227,242
Examiner Elve
Art Unit 1752

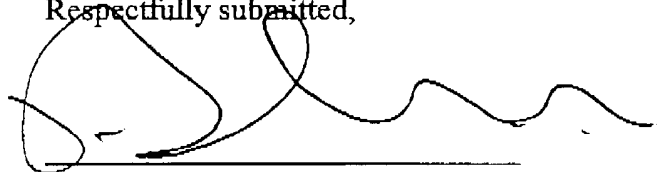
The following is enclosed responsive to the Examiner's Answer of 8 July 2003:

[X] Reply Brief Under 37 CFR 1.193 (12 pages).

AUTHORIZATION TO DEBIT DEPOSIT ACCOUNT

The Commissioner for Patents & Trademarks is hereby authorized to debit any additional fees required under 37 C.F.R. 1.16 and 1.17 from, and to credit any excess fees paid herewith to, Deposit Account No. 02-3290 of the undersigned in connection with the papers presented herewith.

Respectfully submitted,



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Reply To Examiner's Answer
Under 37 CFR 1.193

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)	
)	Atty. Docket No. 8313
MISZCZAK ET AL.)	
)	Examiner M. Elve
Appl. No. 09/227,242)	
)	Art Unit 1725
Filed 8 January 1999)	
For: "Ultra Low Carbon Metal-Core Weld Wire"		

REPLY UNDER 37 CFR 1.193

Assistant Commissioner for Patents
Alexandria, Virginia 22313

SIR:

Change in Claim Status

The applicants acknowledge the Examiner's withdrawal of the rejections of Claims 9-10, 12-13, 16, 23-24 & 26-27 under 35 U.S.C. § 112, second paragraph.

Claims 9-10, 12-13, 16, 23-24 & 26-27 now stand allowed or allowable.

The Appealed claims are Claims 1, 3, 5, 8 & 11.

Issue on Appeal

The sole issue under consideration on appeal is whether Claims 1, 3, 5 & 11 are patentable under 35 U.S.C. § 103 in view of U.S. Patent No. 5,824,992 (Nagarajan).

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Grouping of Claims

Contrary to the Examiner's assertion, the Appellants' Brief filed on 21 June 2002 and Supplemental Brief filed on 19 November 2002 both include, under the heading "Grouping of Claims", statements that the claims do not stand or fall together.

Appealed Claims 1, 3, 8 and 11 do not stand or fall together. The supporting reasons are discussed in connection with the separate grounds for patentability of each Claim as discussed in the referenced Briefs and in the instant Reply.

Reply to Examiner's Argument Regarding Claim 1

Summary of Examiner's Argument

Regarding Claim 1, the Examiner now concedes that "... the exact amounts of the constituent as presently claimed [in the appealed claims] are not disclosed [by Nagarajan]...." Examiner's Answer, 8 July 2003, para. 10. The Examiner alleges, however, that the prior art composition of "... 0.005% to 0.15% carbon is closely approximating to instant [sic] claims" Id.

Carbon Content Range of Nagarajan Different from Claim 1

Claim 1 recites "... a low carbon steel sheath having a carbon content of

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less than 0.005 % C" The recitation in Claim 1 of a "... carbon content less than 0.005 % C ..." is outside the carbon content range between 0.005% to 0.150% disclosed by Nagarajan. The Examiner now apparently concedes this difference. The mere proximity of the prior art carbon content range (0.005% to 0.15%) in Nagarajan to the carbon content range (less than 0.005 % C) in Claim 1 alone does not render Claim 1 obvious under 35 U.S.C. § 103; the respective ranges are different and non-overlapping.

Nagarajan Fume Reduction Different Than Claimed Invention

The Examiner's argument that the weld wire of Nagarajan inherently possesses reduced fume generation is misplaced. The carbon content range of 0.005% - 0.150% disclosed by Nagarajan is greater than the carbon content range "... less than 0.005 % ..." recited in Claim 1. Thus, the weld wire of Nagarajan does not inherently possess the same fume generation possessed by the weld wire of claimed invention, including independent Claim 1, because the carbon content range in Nagarajan is different than the carbon content range in Claim 1.

Nagarajan Fails to Suggest Carbon Content Range in Claim 1

Nagarajan indisputably fails to recognize a relationship between weld wire sheath carbon content and fume generation. Moreover, the Examiner does not contend otherwise. Nagarajan is only concerned, incidently, with reducing the oxygen content in the weld wire. The failure of Nagarajan to recognize a relationship between weld wire sheath carbon content and fume generation supports the applicants

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contention that Nagarajan does not suggest reducing the carbon content in the weld wire sheath to "... less than 0.005 % C ..." as recited in Claim 1. Stated otherwise, because Nagarajan does not recognize the relationship between fume generation and carbon content, there is no suggestion in Nagarajan to further reduce the carbon content in the weld wire sheath to the carbon ranges of the claimed invention. The Examiner's suggestion otherwise is unsupported by Nagarajan and amounts to hindsight reconstruction, which is improper. Nagarajan is concerned instead with reducing the oxygen content in the weld wire by reformulating the weld wire core composition (i.e., by using low-oxygen content iron powder). For these reason, as well as those discussed below, Claim 1 and the claims that depend therefrom are thus patentably distinguished over Nagarajan.

Reply to Examiner's Argument Regarding Claim 3

Summary of Examiner's Argument

Regarding Claim 3, dependent from Claim 1, the Examiner's argument that in Claim 3 a carbon content "... range has not been defined ..." is incorrect. Further, the Examiner's implied contention that Nagarajan discloses the same carbon content in the weld wire core as recited in Claim 3 is also incorrect.

The Limitations on Carbon Content in Claim 3 Are Defined

The limitations of Claim 3, dependent from Claim 1, specify a range for the total carbon in the weld wire and a range for the carbon content in the weld wire

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sheath. Specifically:

(1) Claim 1 recites "... a low carbon steel sheath having a carbon content of less than 0.005 % C ..."; and

(2) Claim 3, dependent from Claim 1, recites that the "... total weight of the metal-core weld wire [i.e., the core and the sheath] comprises between approximately 0.005 % C and approximately 0.013 % C".

Claim 3 therefore definitely specifies the carbon content in both the weld wire sheath and in the weld wire core subject to the carbon content limitations of Claim 1.

Nagarajan Fails to Suggest Carbon Content Range in wire Core & Sheath of Claim 3

Nagarajan must disclose or suggest both carbon content limitations in Claims 1 & 3 to preclude patentability. Nagarajan, however, discloses only that the weld wire sheath has carbon, i.e., between 0.005 % and 0.150%. Nagarajan does not disclose a low carbon metal-core weld wire embodiment with carbon in the core. Particularly, the 1st Table in Column 4, lines 5-14, of Nagarajan indicates that the total carbon content in the low carbon metal-core weld wire (i.e., the total amount of carbon in the core and sheath together) is between 0.005 - 0.150 % in the 1st embodiment and between 0.005-0.040 % in the 2nd embodiment. The 2nd Table of Nagarajan (which specifies the core composition) in Column 4, lines 17-25 of Nagarajan specifies no carbon in the core composition. The 3rd Table of Nagarajan (which specifies the sheath composition) indicates that the sheath of the low carbon metal-core weld wire contains between 0.005 -0.150 % carbon in the 1st embodiment and between 0.005-0.040 % carbon in the 2nd embodiment. The only reasonable interpretation of the Tables 1-3 in

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column 4 of Nagarajan is that all of the carbon is in the weld wire sheath, since Nagarajan does not indicate that the core composition includes any carbon. Similar reasoning applies to the other low-carbon metal-core weld wire embodiments of Nagarajan. Thus, contrary to the Examiner's assertion, Nagarajan does not disclose a weld wire comprising

... a low carbon steel sheath having a carbon content
of less than 0.005 % C ...
... total weight of the metal-core weld wire
comprises between approximately 0.005 % C and
approximately 0.013 % C".

For these reasons, as well as those discussed above in connection with independent Claim 1 and the discussion below, Claim 3 is also further distinguished over Nagarajan.

Reply to Examiner's Argument Regarding Claim 8

Nagarajan Does Not Suggest Carbon Content Range in Core

Regarding Claim 8, dependent from Claim 1, contrary to the Examiner's assertion, Nagarajan does not disclose or suggest a "... metal-core composition comprising not more than approximately 0.0047 % C ..." in combination with the limitations of Claim 1.

As noted above in connection with the discussion of the allowability of Claim 3, Nagarajan discloses only that wire sheath contains carbon. None of the low carbon metal-core weld wire embodiments disclosed by Nagarajan include carbon in the core composition. For these reasons, as well as those discussed above and below,

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Claim 8 is further patentably distinguished over Nagarajan.

Reply to Examiner's Argument Regarding Claim 11

Nagarajan Fails to Suggest Carbon Content Range in the Core

Regarding Claim 11, contrary to the Examiner's assertion, Nagarajan does not disclose or suggest a "... metal-core composition [] between approximately 17 % and approximately 19 % of the total weight of the metal-core weld wire, the metal-core composition comprising not more than approximately 0.0046 % C" in combination with the limitations of Claim 1.

As noted above regarding the allowance of Claims 3 and 8, none of the weld wire embodiments disclosed by Nagarajan disclose or suggest weld wire core carbon content "... not more than approximately 0.0046 % ..." as recited in Claim 11. The low carbon metal core weld wires of Nagarajan do not possess any carbon in the core. For these reasons, as well as those discussed above and below, Claim 11 is further patentably distinguished over Nagarajan.

Examiner's Failure to Consider Secondary Considerations

Summary of Examiner's Objection to Affidavit

The Examiner raises new issues regarding the contents that the Affidavit under 37 CFR 1.132. It is alleged particularly that the Affidavit is insufficient to overcome the rejections of the claims because

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... Applicant has not provided any data to substantiate success of the weld wires. There is no data with respect to market share. It is not known if increased sales are due to just a general increase in sales in the market or if the increase was just due to the introduction of the weld wires. Furthermore, it is not known if the increase in sales are due to a technical improvement or due to improved marketing, sales incentive or pricing. Examiner's Answer, 18 July 2003.

Examiner Must Afford Some Probative Weight to Commercial Success

The Examiner's refusal to give probative weight to the Affidavit under 37 CFR 1.132 because the Affiant's assertion regarding commercial success may be attributed to factors other than improvements attributed to the claimed invention is improper.

The sale of the subject weld wire is to relatively technically sophisticated customers that do not make emotional or spontaneous purchases influenced easily by advertising, marketing and incentives. Purchasing decisions are thoughtful, deliberate and based on performance and compliance with industry standards specifications, and on cost. Under these circumstances the commercial success of the subject weld wire cannot be attributed alone to advertising, marketing and incentives.

At least some probative weight must be given to commercial success based on the factors supporting commercial success in the Affidavit. The Affidavit establishes that the low fume metal core weld wires that are the subject of the claimed inventions have displaced the sale of flux-core weld wire to Affiant's customers (e.g., customers welding in-doors and in environments where fumes are problematic) for several reasons, including reduced fume production and performance. The Affiant

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states in the Affidavit at para. 9, that the

FabCOR80XLS" and "Eclipse ULTIMET 716" low fume metal-core weld wires have substantially displaced the use of flux-core weld wires by some customers of ITW Hobart CANADA by virtue of the relatively low fume production of the "FabCOR80XLS" and "Eclipse ULTIMET 716" metal-core weld wires and their compliance with industry specifications.

Another reason that the low fume metal core weld wires that are the subject of the claimed inventions have displaced the sale of flux-core weld wire is that the subject weld wires enable customers to comply with health and safety regulations while welding indoors and in enclosed areas. The Affiant states in the Affidavit at para. 10,

That the "FabCOR80XLS" and "Eclipse ULTIMET 716" low fume metal-core weld wires have enabled customers to comply with trade union and regulatory mandates by virtue of their low fume production

Thus the Affidavit at paras. 9 and 10 indicate that the commercial success of the product is not attributed solely to marketing, advertising and incentives. To require the Applicant to establish that commercial success is not due to advertising or factors other than the claimed invention would render it nearly impossible to rely ever on commercial success. The Applicants submit that the establishment that the increased sales is due, at least partly, to reduced fume production and performance creates an inference that invention is commercially successful.

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Examiner Must Give Consideration to Other Factors Supporting Non-obviousness

The Affidavit at paras. 9 & 10, which were discussed above, indicates that the weld wires that are the subject of the claimed inventions overcame substantial problems and fulfilled industry needs: namely, reduced fume production, performance, and compliance with health and safety regulations. The Affidavit states at para. 8

[t]hat prior to the filing of the referenced patent application, Hobart embarked on a strategic initiative to develop low fume weld wires without loss of performance characteristics, motivated in part by industry desires to reduce welding fumes generally and to comply with governmental regulations;

These problems were also alluded to in the Background of the instant patent specification. Thus the weld wires that are the subject of the claimed inventions have met a industry need by solving significant problems previously unsolved by others. Not only do these objective indicia or secondary considerations support commercial success as discussed above, but they must also be give probative weight standing separate and apart from commercial success when applying 35 U.S.C. § 103.

The commercial success, discussed above, of the subject weld wire supports the applicants contention that the claimed invention has resolved problems in the art, that the claimed invention has met needs in the industry. Thus the evidence supporting applicant assertion of commercial success are also probative relative to these other secondary considerations, particularly in view of the fact that the sophisticated purchasers of the products covered by the claimed invention make decisions based

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initially in performance and compliance with industry specifications.

Effect of Affidavit

The Affidavit and supporting factual evidence establish not only that the invention is commercially successful, but also that the subject matter of the claimed inventions overcame problems in the art by reducing fume production, that the subject matter of the claimed inventions complied with industry strength and toughness specifications, and helped operator complying health and safety regulations by virtue of the reduced fume production.

The ultimate determination of patentability must be based on consideration of the entire record, by preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary considerations, including those other than commercial success. MPEP §§ 716.01(d) and 2144.08. Applicants' arguments during prosecution and in the Briefs including the evidence of secondary considerations supported by the Affidavit under 37 CFR 1.132, when considered as a whole, overwhelmingly rebut any presumption created to the extent that the Examiner's reliance on Nagarajan states a prima facie case of obviousness.

Claims 1, 3, 5, 8 & 11 are thus patentably distinguished over Nagarajan.

Prayer for Relief

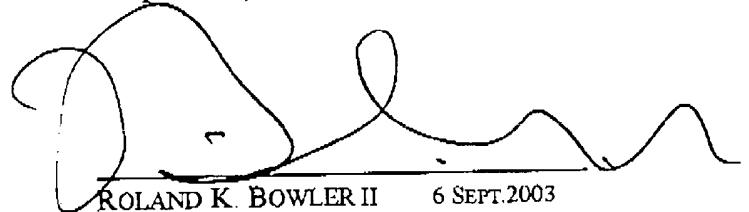
The remarks above addressing the rejections under 35 U.S.C. 103, especially when taken in consideration with the perfected Affidavit under 37 CFR 1.132, overwhelmingly defeat the Examiner's tenuous obviousness allegations. Kindly

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reverse and vacate the rejections of Claims 1 and 3-27 and instruct the Examiner to
allow said Claims to issue as a United States Patent without further delay.

Respectfully submitted,



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